

# Water Quality and Conservation Objective 3: Irrigation Water for Crops

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**Region:** SOUTH                      **Circle which primary base program it addresses -** ANR

## **Section 1. Relevance**

### **Where did this issue surface?**

Texas Community Futures Forum

County Committees

Commodity / Industry / Special Interest Groups

Specialist(s)

County Extension Agents also identified this as an issue their ag producers are facing in their counties.

### **What is the issue/problem?**

Efficiency fo water use through timing and application. Limited water supply and water quality for irrigation crops, crop yield due to low quality water, cost of energy for producing water.

### **Problem size and scope? (How many people does it affect? How wide spread?)**

Winter Garden to Houston and Rio Grand Plain

Statewide

### **Problem severity? (How serious is this issue?)                      *HIGH***

Description:

### **Target Audience? (Who does the problem impact and how many?)**

Irrigation Producers

### **What are some general characteristics of the audience this program targets? How will you market this program to others?**

Audience is landowners, right to retain ownership, low profit margins, tight budgets, large capitol investments, high initial investments for water conserving technology.

## Section 2. Response

State the goal of the program.

*Improve efficiency of water we have; maintain soil quality.*

State the outcome objectives.

<b>Client Change</b>	<b>At the end of this program, will....</b>
<i>Knowledge</i>	increase knowledge on.... <ol style="list-style-type: none"><li>1) Irrigation technologies,</li><li>2) Water conserving practices,</li><li>3) irrigation schedule,</li><li>4) monitoring techniques for soil moisture,</li><li>5) Identification of crop stress,</li><li>6) Crop residues for soil moisture conservation; economics; factors effecting water use efficiency,</li><li>7) understand water reuse,</li><li>8) understanding, management water and nutrient application</li></ol>
<i>Skills</i>	develop skills.... <ol style="list-style-type: none"><li>1) Calculating water use efficiency,</li><li>2) How to use new technologies correcting for serge, drift, etc.,</li><li>3) Read soil moisture sensor and interpret data,</li><li>4) water reuse and constraint,</li><li>5) water testing</li></ol>
<i>Attitude</i>	change their attitudes pertaining to... <ol style="list-style-type: none"><li>1) Availability of water,</li><li>2) Water conserving is good but expensive for me to incorporate in the average operation,</li><li>3) Irrigation systems for risk management,</li><li>4) Water reuse and constraint</li></ol>
<i>Behavior Change</i>	adopt... <ol style="list-style-type: none"><li>1) Producer use water wisely to fit needs and resources,</li><li>2) Adopt evaluation procedures to select best BMP's for situation on enterprises.</li></ol>
<i>New Technology</i>	adopt.... <ol style="list-style-type: none"><li>1) Best application strategy and equipment BMP's for water use efficiency.</li></ol>
<i>Best Practice</i>	adopt .....

### Program Design

Topic (Subject Matter)	Strategy to Deliver Content (Method)	Existing Resource(s)	Contact Person(s) (Includes CEA's Specialists, Commodity Reps)
Water supply Irrigation technology Irrigation scheduling Solicity measurements Nutrient management for water quality Know stage of crop	workshop/tour/field days Result demonstrations	TCE USDA-Equip grants local agronomist Rio Grand Initiative	Allen Jones, TWRI Bill Harris, TWRI Bruce Lesikar  Charles Stichler, Steve Livingston Mark McFarland
Water Testing	Publications, Websites	TCE, industry resources TCE Specialist Texas Water Development Board TCEQ	Tony Provin Charles Stichler Monte Dozier
Irrigation Economics			John Robinson Larry Falconer Roland Smith
Irrigation			
Irrigation Water Supply	Workshop/seminar Publications Conferences	TCE Specialists Regional Planning Groups (5) Ground water Conservation District	Dr. Bruce Lesikar Kurt Blementhal

### Section 3. Results

The last section deals with evaluation of this program. The evaluation content should mirror the objectives that are outlined in section two. Please try and list some specific questions that should be asked to the target audience to determine if the intended change took place. List as many potential questions as possible. The goal here is to create a question bank for each client change level so that the educator can review these questions to see if any of them are relevant to their program. If they are, then they can use them to measure change in their program. Remember,

not all evaluation strategies have to be written questionnaires. They may also be interviews, direct observation, or focus groups. Please describe your method in this section where appropriate.

<b>Client Change Level</b>	<b>Sample Questions</b> (Review the objectives section to help place questions or statements in the space below)
<i>Knowledge</i>	
<i>Skills</i>	
<b>Client Change Level</b>	<b>Sample Questions</b> (Review the objectives section to help place questions or statements in the space below)

*Attitude*

*Behavior Change*

<b>Client Change Level</b>	<b>Sample Questions</b> (Review the objectives section to help place questions or statements in the space below)
<i>New Technology</i>	
<i>Best Practice</i>	

**Economic Indicators.** Are there economic indicators that can be measured concerning this issue?

YES      NO

Please list them below.

**Interpretation.** The last step in the process is interpreting the results to our stakeholders. List internal and external stakeholders that would be interested in the results of this educational program. Do not forget to think about other state agencies and groups that would be interested in these outcomes.

Internal to Extension Stakeholders	External Stakeholders

**Additional Resources.** What additional resources are needed to address this issue? In other words, what is needed to design innovative programs that will impact our audiences? Use the space below or the back if needed.